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Hansen, Zaza Nadja Lee; Jacobsen, Peter

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Waste management in food production

Zaza Nadja Lee Hansen*[1], Peter Jacobsen[1]

1: DTU Management

*Corresponding author email: znlh@dtu.dk

Raw materials in industrial food production have traditionally been cheap. As a consequence the focus has been on efficiency. Waste management, recycling material and other sustainable concerns has first recently entered into the production concerns for this sector.

Figure: 1: Waste material due to height differences on the belt (fixed with the fellow fork truck)

In this industry the need for quick action, due to the perishable nature of the raw materials and partly finished goods, as well as the need for hygiene and other food safety requirements, means that it is normal to have waste margins up to 20% per batch as it is considered better to save 80% by throwing out 20%.

The challenge is to present a new production paradigm which focus on sustainable yet competitive industrial food production initiatives. Some of the ideas we will present for this include:

1. Automated quality control
2. Documented workflow descriptions
3. Embedded lean philosophy
4. Improved sales and operations planning process
5. Improved supply chain management
6. Improved sustainability awareness in the industry

The goal is to develop a sustainable production framework which considers the unique characteristics of industrial food production. This framework should consider the embedded nature of production as detailed above, including sales and operations planning, supply chain management and organizational structures. We wish to test this framework in several SME and large industrial food companies in Denmark and after implementing their feedback we wish to publish the framework as a guide to the industry as a whole.